

C. Kaufman

1646

PAGE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/955,572A

DATE: 11/05/1998  
TIME: 16:17:59

Input Set: H955572A.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

new format

1 <110> APPLICANT: Kwon, Byoung  
2 <120> TITLE OF INVENTION: NEW RECEPTOR AND RELATED PRODUCTS AND  
3 METHODS  
4 <130> FILE REFERENCE: 740.013US2  
5 <140> CURRENT APPLICATION NUMBER: US/08/955,572A  
6 <141> CURRENT FILING DATE: 1998-10-22  
7 <150> EARLIER APPLICATION NUMBER: 08/461,652  
8 <151> EARLIER FILING DATE: 1995-06-05  
9 <150> EARLIER APPLICATION NUMBER: 08/122,796  
10 <151> EARLIER FILING DATE: 1993-09-03  
11 <160> NUMBER OF SEQ ID NOS: 10  
12 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
13 <210> SEQ ID NO 1  
14 <211> LENGTH: 838  
15 <212> TYPE: DNA  
16 <213> ORGANISM: Homo sapiens  
17 <400> SEQUENCE: 1  
18 aatcagcttt gctagtatca tacctgtgcc agatttcac atgggaaaca gctgttacia 60  
19 catagtagcc actctgttgc tggctctcaa ctttgagagg acaagatcat tgcaggatcc 120  
20 ttgtagtaac tgcccagctg gtacattctg tgataataac aggaatcaga tttgcagtcc 180  
21 ctgtcctcca aatagtttct ccagcgcagg tggacaaagg acctgtgaca tatgcaggca 240  
22 gtgtaaaagg gttttcagga ccaggaagga gtgttcctcc accagcaatg cagagtgtga 300  
23 ctgcactcca gggtttctact gacctggggc aggatgcagc atgtgtgaac aggattgtaa 360  
24 acaaggtcaa gaactgacaa aaaaagggtg taaagactgt tgctttggga catttaacga 420  
25 tcagaaacgt ggcactctgc gacctggac aaactgttct ttggatggaa agtctgtgct 480  
26 tgtgaatggg acgaaggaga gggacgtggc ctgtggacca tctccagctg acctctctcc 540  
27 gggagcatcc tctgtgacct cgctgcccc tgcgagagag ccaggacact ctccgcagat 600  
28 catctccttc tttcttgccg tgacgtcgac tgcgttgctc ttctgtgtgt tcttctctac 660  
29 gctccgtttc tctgttggtt aacggggcag aaagaaactc ctgtatatat tcaaacaacc 720  
30 atttatgaga ccagtacaaa ctactcaaga ggaagatggc tgtagctgcc gatttccaga 780  
31 agaagaagaa ggaggatgtg aactgtgaaa tggaagtcaa tagggctgtt gggacttt 838

Does Not Comply  
Corrected Diskette Needed

32 <210> SEQ ID NO 2  
33 <211> LENGTH: 255  
34 <212> TYPE: PRT  
35 <213> ORGANISM: Homo sapiens  
36 <400> SEQUENCE: 2  
37 Met Gly Asn Ser Cys Tyr Asn Ile Val Ala Thr Leu Leu Leu Val Leu  
38 1 5 10 15  
39 Asn Phe Glu Arg Thr Arg Ser Leu Gln Asp Pro Cys Ser Asn Cys Pro  
40 20 25 30  
41 Ala Gly Thr Phe Cys Asp Asn Asn Arg Asn Gln Ile Cys Ser Pro Cys  
42 35 40 45  
43 Pro Pro Asn Ser Phe Ser Ser Ala Gly Gly Gln Arg Thr Cys Asp Ile  
44 50 55 60

PAGE: 2

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/955,572A

DATE: 11/05/1998  
TIME: 16:17:59

Input Set: H955572A.RAW

```

45      Cys Arg Gln Cys Lys Gly Val Phe Arg Thr Arg Lys Glu Cys Ser Ser
46      65              70              75              80
47      Thr Ser Asn Ala Glu Cys Asp Cys Thr Pro Gly Phe His Cys Leu Gly
48              85              90              95
49      Ala Gly Cys Ser Met Cys Glu Gln Asp Cys Lys Gln Gly Gln Glu Leu
50              100             105             110
51      Thr Lys Lys Gly Cys Lys Asp Cys Cys Phe Gly Thr Phe Asn Asp Gln
52              115             120             125
53      Lys Arg Gly Ile Cys Arg Pro Trp Thr Asn Cys Ser Leu Asp Gly Lys
54              130             135             140
55      Ser Val Leu Val Asn Gly Thr Lys Glu Arg Asp Val Val Cys Gly Pro
56      145              150              155              160
57      Ser Pro Ala Asp Leu Ser Pro Gly Ala Ser Ser Val Thr Pro Pro Ala
58              165              170              175
59      Pro Ala Arg Glu Pro Gly His Ser Pro Gln Ile Ile Ser Phe Phe Leu
60              180             185             190
61      Ala Leu Thr Ser Thr Ala Leu Leu Phe Leu Leu Phe Phe Leu Thr Leu
62              195             200             205
63      Arg Phe Ser Val Val Lys Arg Gly Arg Lys Lys Leu Leu Tyr Ile Phe
64              210             215             220
65      Lys Gln Pro Phe Met Arg Pro Val Gln Thr Thr Gln Glu Glu Asp Gly
66      225             230             235             240
67      Cys Ser Cys Arg Phe Pro Glu Glu Glu Glu Gly Gly Cys Glu Leu
68              245             250             255

```

69 &lt;210&gt; SEQ ID NO 3

70 &lt;211&gt; LENGTH: 20

71 &lt;212&gt; TYPE: DNA

72 &lt;213&gt; ORGANISM: Homo sapiens

73 &lt;400&gt; SEQUENCE: 3

74 ttytgymgaa artayaaycc 20

75 &lt;210&gt; SEQ ID NO 4

76 &lt;211&gt; LENGTH: 20

77 &lt;212&gt; TYPE: DNA

78 &lt;213&gt; ORGANISM: Homo sapiens

79 &lt;400&gt; SEQUENCE: 4

80 ttytcstsca htgggtggaca 20

81 &lt;210&gt; SEQ ID NO 5

82 &lt;211&gt; LENGTH: 20

83 &lt;212&gt; TYPE: DNA

84 &lt;213&gt; ORGANISM: Homo sapiens

85 &lt;400&gt; SEQUENCE: 5

86 cccargswrc aggttyttrca 20

87 &lt;210&gt; SEQ ID NO 6

88 &lt;211&gt; LENGTH: 20

89 &lt;212&gt; TYPE: DNA

90 &lt;213&gt; ORGANISM: Homo sapiens

91 &lt;400&gt; SEQUENCE: 6

92 ttytgtrcrt traatgttcc 20

93 &lt;210&gt; SEQ ID NO 7

94 &lt;211&gt; LENGTH: 25

PAGE: 3

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/955,572A

DATE: 11/05/1998  
TIME: 16:17:59

Input Set: H955572A.RAW

95 <212> TYPE: DNA  
96 <213> ORGANISM: Homo sapiens  
97 <400> SEQUENCE: 7  
98 aataagcttt gctagtatca tacct 25  
99 <210> SEQ ID NO 8  
100 <211> LENGTH: 30  
101 <212> TYPE: DNA  
102 <213> ORGANISM: Homo sapiens  
103 <400> SEQUENCE: 8  
104 ttaagatctc tgcggagagt gtcctggctc 30  
105 <210> SEQ ID NO 9  
106 <211> LENGTH: 2350  
107 <212> TYPE: DNA  
108 <213> ORGANISM: Mus musculus  
109 <400> SEQUENCE: 9  
110 atgtccatga actgctgagt ggataaacag cacgggatat ctctgtctaa aggaatatta 60  
111 ctacaccagg aaaaggacac attcgacaac aggaaaggag cctgtcacag aaaaccacag 120  
112 tgtcctgtgc atgtgacatt tcgccatggg aaacaactgt tacaacgtgg tggtcattgt 180  
113 gctgctgcta gtgggctgtg agaagggtggg agcctgtcag aactcctgtg ataactgtca 240  
114 gcctggtaact ttctgcagaa aatacaatcc agtctgcaag agctgccctc caagtacctt 300  
115 ctccagcata ggtggacagc cgaactgtaa catctgcaga gtgtgtgcag gctatttcag 360  
116 gttcaagaag ttttgctcct ctaccacaa cgcggagtgt gagtgcattg aaggattcca 420  
117 ttgcttgggg ccacagtga ccagatgtga aaaggactgc aggcctggcc aggagctaac 480  
118 gaagcagggt tgcaaaacct gtagcttggg aacatttaat gaccagaacg gtactggcgt 540  
119 ctgtcgacct tggacgaact gctctctaga cggaaggctc gtgcttaaga ccgggaccac 600  
120 ggagaaggac gtggtgtgtg gacccctgtt ggtgagcttc tctcccagta ccaccatttc 660  
121 tgtgactcca gagggaggac caggagggca ctccctgcag gtccttacct tgttccctggc 720  
122 gctgacatcg gctttgctgc tggccctgat cttcattact ctccgttctc ctgtgtctca 780  
123 atggatcagg aaaaaattcc ccacatatatt caagcaacca tttagaaga cactggagc 840  
124 agctcaagag gaagatgctt gtagctgccg atgtccacag gaagaagaag gaggaggagg 900  
125 aggctatgag ctgtgatgta ctatcctagg agatgtgtgg gccgaaaccg agaagcacta 960  
126 ggacccacc atcctgtgga acagcacaag caacccacc accctgttct tacacatcat 1020  
127 cctagatgat gtgtgggcgc gcacctcatc caagtctctt ctaacgctaa catatttgtc 1080  
128 tttacctttt ttaaactctt ttttaaattt aaattttatg tgtgtgagtgt ttttgctgc 1140  
129 ctgtatgcac acgtgtgtgt gtgtgtgtgt gtgacactcc tgatgctga ggaggtcaga 1200  
130 *all* *item* *10 m* *Env* *hum* *st* agacaaaagg ttggttccat aagaactgga gttatggatg gctgtgagcc ggnngatag 1260  
131 gtcgggacgg agacctgtct tcttatttta acgtgactgt ataataaaaa aaaaatgata 1320  
132 tttcgggaat tgtagagatt gtcctgacac ctttctagtt aatgatctaa gaggaattgt 1380  
133 tgatacgtag tatactgtat atgtgtatgt atatgtatat gtatatataa gactctttta 1440  
134 ctgtcaaagt caacctagag tgtctgggta ccagggtcaat tttattggac attttacgtc 1500  
135 acacacacac acacacacac acacacacgt ttatactacg tactgttatc ggtattctac 1560  
136 gtcataataat gggatagggt aaaaggaaac caaagagtga gtgatattat tgtggagggtg 1620  
137 acagactacc ctttctgggt acgtagggac agacctcctt cggactgtct aaaactcccc 1680  
138 ttagaagtct cgtcaagttc ccggacgaag aggacagagg agacacagtc cgaaaagtta 1740  
139 tttttccggc aaatcctttc cctgtttcgt gacactccac cccttgtgga cacttgagtgt 1800  
140 tcatccttgc gccggaagggt caggtgttac ccgtctgtag gggcggggag acagagccgc 1860  
141 gggggagcta cgagaatcga ctacacagggt gccccgggct tcgcaaatga aactttttta 1920  
142 atctcacaag tttcgtccgg gctcggcgga cctatggcgt cgatccttat taccttatcc 1980  
143 tggcgccaag ataaaacaac caaaagcctt gactccggtg ctaattctcc ctgccggccc 2040  
144 ccgtaagcat aacgcggcga tctccacttt aagaacctgg ccgcgttctg cctgggtctcg 2100

W--&gt;

PAGE: 4

RAW SEQUENCE LISTING  
PATENT APPLICATION US/08/955,572A

DATE: 11/05/1998  
TIME: 16:17:59

Input Set: H955572A.RAW

```

145      ctttcgtaaa cggttccttac aaaagtaatt agttcttgct ttcagcctcc aagcttctgc      2160
146      tagtctatgg cagcatcaag gctgggtattt gctacggctg accgctacgc cgccgcaata      2220
147      agggactagg gcggcccgtc gaaggccctt tggtttcaga aacccaaggc cccctcata      2280
148      ccaacgtttc gactttgatt cttgccggta cgtgggtggtg ggtgccttag ctctttctcg      2340
149      atagtttagac                                     2350
150 <210> SEQ ID NO 10
151 <211> LENGTH: 256
152 <212> TYPE: PRT
153 <213> ORGANISM: Mus musculus
154 <400> SEQUENCE: 10
155      Met Gly Asn Asn Cys Tyr Asn Val Val Val Ile Val Leu Leu Leu Val
156      1          5          10          15
157      Gly Cys Glu Lys Val Gly Ala Val Gln Asn Ser Cys Asp Asn Cys Gln
158      20          25          30
159      Pro Gly Thr Phe Cys Arg Lys Tyr Asn Pro Val Cys Lys Ser Cys Pro
160      35          40          45
161      Pro Ser Thr Phe Ser Ser Ile Gly Gly Gln Pro Asn Cys Asn Ile Cys
162      50          55          60
163      Arg Val Cys Ala Gly Tyr Phe Arg Phe Lys Lys Phe Cys Ser Ser Thr
164      65          70          75          80
165      His Asn Ala Glu Cys Glu Cys Ile Glu Gly Phe His Cys Leu Gly Pro
166      85          90          95
167      Gln Cys Thr Arg Cys Glu Lys Asp Cys Arg Pro Gly Gln Glu Leu Thr
168      100         105         110
169      Lys Gln Gly Cys Lys Thr Cys Ser Leu Gly Thr Phe Asn Asp Gln Asn
170      115         120         125
171      Gly Thr Gly Val Cys Arg Pro Trp Thr Asn Cys Ser Leu Asp Gly Arg
172      130         135         140
173      Ser Val Leu Lys Thr Gly Thr Thr Glu Lys Asp Val Val Cys Gly Pro
174      145         150         155         160
175      Pro Val Val Ser Phe Ser Pro Ser Thr Thr Ile Ser Val Thr Pro Glu
176      165         170         175
177      Gly Gly Pro Gly Gly His Ser Leu Gln Val Leu Thr Leu Phe Leu Ala
178      180         185         190
179      Leu Thr Ser Ala Leu Leu Leu Ala Leu Ile Phe Ile Thr Leu Leu Phe
180      195         200         205
181      Ser Val Leu Lys Trp Ile Arg Lys Lys Phe Pro His Ile Phe Lys Gln
182      210         215         220
183      Pro Phe Lys Lys Thr Thr Gly Ala Ala Gln Glu Asp Ala Cys Ser
184      225         230         235         240
185      Cys Arg Cys Pro Gln Glu Glu Gly Gly Gly Gly Tyr Glu Leu
186      245         250         255

```

PAGE: 5

VERIFICATION SUMMARY  
PATENT APPLICATION US/08/955,572A

DATE: 11/05/1998  
TIME: 16:17:59

Input Set: H955572A.RAW

Line	? Error/Warning	Original Text
130	W "N" or "Xaa" used: Feature required	agacaaaggg ttggttccat aagaactgga gttatgga

# Raw Sequence Listing Error Summary

## ERROR DETECTED   SUGGESTED   CORRECTION

SERIAL NUMBER: \_\_\_\_\_

**ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE**

- 1           **Wrapped Nucleks**      The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
  
- 2           **Wrapped Amines**      The amino acid number/text at the end of each line "wrapped " down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
  
- 3           **Incorrect Line Length**      The rules require that a line not exceed 72 characters in length. This includes spaces.  
All text must be visible on page.
  
- 4           **Misaligned Amino Acid Numbering**      The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and uses spacing between the numbers.
  
- 5           **Non-ASCII**      This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
  
- 6           **Variable Length**      Sequence(s) \_\_\_\_\_ contain n's or Xaa's which represented more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and indicate in the (ix) features section that some may be missing.
  
- 7           **Wrong Designation**      Sequence(s) \_\_\_\_\_ contain amino acid or nucleic acid designators which are not standard representations as per the Sequence Rules (Please refer to paragraph 1.822)
  
- 8           **Skipped Sequences (OLD RULES)**      Sequence(s) \_\_\_\_\_ missing. If intentional, please use the following format for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X:  
(I) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
(xI) SEQUENCE DESCRIPTION:SEQ ID NO:X:  
This sequence is intentionally skipped  
  
Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
  
- 9           **Skipped Sequences (NEW RULES)**      Sequence(s) \_\_\_\_\_ missing. If intentional, please use the following format for each skipped sequence.  
<210> sequence Id number  
<400> sequence Id number  
000
  
- 10           **Use of N's or Xaa's (NEW RULES)**      Use of N's and/or Xaa's have been detected in the Sequence Listing.  
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
  
- 11           **Use of <213>Organism (NEW RULES)**      Sequence(s) \_\_\_\_\_ are missing this mandatory field or its response.
  
- 12           **Use of <220>Feature (NEW RULES)**      Sequence(s) \_\_\_\_\_ are missing the <220>Feature and associated headings.  
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"  
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32)  
(Sec. 1.823 of new Sequence Rules)
  
- 13           **Wrong Format**      File submitted was in the alphabetical heading format of the Old Sequence Rules.This is invalid since the "Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Disclosures" Federal Register Notice, Vol. 63, No. 104, June 1, 1998, p. 29620 applies to applications filed on or after July 1, 1998.

AKS-Biotechnology Systems Branch- 7/10/98

BEST AVAILABLE COPY